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How do recruits and superintendents perceive the problem of suicide in the Italian State Police?

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Abstract

Background. Suicide in international police is 2-3-fold that of the general population. Risk factors include suicidal ideation, diagnosis of mood or post-traumatic stress disorders, family/psychological problems, suffered abuse, alcohol use, service suspension, and stigma. A false stigma-related myth is to believe that suicide does not cause concern within military settings.

Methods. We administered post-training to 6103 Italian Police workers a 30-item questionnaire to assess the perception of suicidal phenomena. We conducted descriptive statistics, principal component analysis, and analyses of variance of data.

Results. We identified seven factors, i.e., health and environmental risk factors; need for new preventive interventions; emotional reaction to suicide; negation, indifference and minimization; utility of current preventive interventions; risk related to personal factors; intervention difficulties.

Conclusions. The questionnaire showed content validity and consistency in investigating perceptions about suicide in the State Police. Data synthesis showed a mature approach and appropriate perception of the suicide problem on behalf of Italian State Police workers.

Key words

- suicidal ideation
- stigma
- self-rated assessment
- questionnaire
- factor analysis

INTRODUCTION

The rate of suicide in the international police forces is about 2-3 times higher than that of the general population. Suicidal ideation has been associated with variables such as divorce, age above 40, job dissatisfaction, expression of somatic complaints, anxiety, depression, and burnout [1, 2]. Risk factors for suicide in international police are mainly represented by suicidal ideation, diagnosis of major depressive or other mood disorder, presence of family conflicts, marital problems, and/or personal psychological problems, diagnosis of post-traumatic stress disorder, alcohol use disorder (especially in young people), and being suspended from service [3]. Differently from the general population, single marital status is not a risk factor [4].

On the other hand, several protective factors for suicide have been identified in police forces. These mainly included camaraderie, perception of a positive sense of professional and life purpose, presence of family and social support, organizational support, adequate selection of staff, medical and psychological services at the police, and periodic inspections [5]. These protective factors are in line with current theoretical models of suicide risk [6-8], which emphasize the importance of being socially integrated.

Often, social integration is endangered by stigma phenomena that tend to isolate people at risk of suicide. In general, stigma is an important aggravating factor in

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suicide risk conditions. Silence about military suicide leads to reduced use of psychological autopsy, resulting in reduced possibilities for understanding the people involved and studying the phenomenon [9].

Receiving psychiatric treatment can be perceived as strongly stigmatizing in the armed forces. Furthermore, people in the military often attempt to deny their discomfort for suicidal issues and stigma in general. In these environments, the staff is also diffusely concerned about reporting psychological discomfort to their colleagues and superiors, as they worry about possible negative professional consequences. In military environments, stigma for mental illness is very strong and military personnel tend to deny all forms of mental disorder, unless they hope to find another job [9].

Despite social progresses in Western countries, suicide attempters are likely to be socially stigmatized; stigma tends to be extended to family members and people close to people who committed suicide, as if the blame and shame attached to the people taking their lives should be extended to all those who had intimate and deep contact with them. Stigma is also related to the false myth that suicide is a "delicate" subject, not to be openly dealt with in psychiatric interviews, lest that the only explicitly speaking about it could generate emulative mechanisms [9-11].

Other false myths related to stigma consist in believing that the problem of suicide does not cause concern in military settings, or that the main problem is easy access to firearms and other weapons or that more aggressive individuals may be included during enrolment, although literature points rather to the opposite [1].

Suicide is one of the expressions of perceived psychological distress and constitutes a powerfully traumatic experience for witnesses. Hence, heightening the ability of police recruits and supervisors to detect risk and to deal appropriately so to set it off, is a desirable target of any training course for police forces. In this context, we organised a training module with the aim to promote the development of emotional and relational competences of participants with the aim to prevent distress. In this paper we will focus only on the validation of a questionnaire aiming at probing the beliefs about suicide of peers in a sample of policemen.

To assess how the suicide problem is perceived within the State Police following a specific course on the prevention, recognition, and management of psychological distress, of which suicide committed by policemen was one of the main targets, we prepared and administered to Police personnel a 30-item, self-rated questionnaire investigating various domains of perception of suicide committed by workmates. The purpose of this study was to analyse the validity and the factors of the questionnaire. A secondary objective was to identify gender differences in the factors investigated by the questionnaire as well as the differences between recruits and superintendents at this regard.

METHODS

The questionnaire has been delivered in the context of the training module "Staff Welfare: Prevention, Recognition and Management of Discomfort of State Police Operators", during the training courses for superintendents and police recruits. This training module had the purpose to prevent distress in police forces by promoting the development of emotional and relational competences of its participants. One of its aims was to address the issue of suicide in the Police. The module focused on elements of establishing a relationship, on the definition of psychological distress, and on emotional, behavioural, and cognitive indicators of distress. Among the latter, suicide in peers occupied a prominent position. The questionnaire was freely inspired by a panel of the authors of the Department of Neurology and Clinical Psychology of the Healthcare Central Operations Service, Central Directorate of Health, Department of Public Security, Italy.

The Perceptions About Suicide Questionnaire (PASQ) *(Table 1)* has been administered anonymously at the end of a training course and consisted of 30 closed-ended questions with five structured response alternatives according to a Likert scale, ranging from "absolutely disagree" (= 1) to "fully agree" (= 5) for each item. Items were statements pertaining to the following thematic areas:

- perception of the phenomenon of psychological distress and suicide in State Police;
- intervention strategies to reduce the phenomenon;
- professional reference figures for psychological support in State Police;
- suicide motives;
- emotional experience with respect to psychological distress and the issue of suicide.

The questionnaire takes an average of 10 minutes to complete and the Likert scale allows respondents to freely and flexibly express their opinion and attitude on the issue raised by each item, thus rendering factor analysis easier and more reliable. We administered the questionnaire to volunteers in multiple sites across the country.

Statistical analysis

We used the SPSS Statistics V24.0 software (IBM Corporation, Armonk, New York, 2016) for statistical analyses. Differences with respect to age and other continuous variables between men and women and between recruits and superintendents were analysed through one-way analysis of variance (one-way ANOVA). We used the *chi*-squared test to analyse the differences in the categorical variables "gender" and "professional role".

Subsequently, we conducted Principal Component Analysis (PCA) with *Varimax* rotation and computed the bivariate correlation (Pearson's p test) between resulted factors. Then we carried-out one-way ANOVA to detect the differences between men and women and between recruits and superintendents on each factor resulting from PCA. Finally, we computed a three-way analysis of variance having the factors as dependent variable (one analysis for each factor) and gender, age and group (recruits/superintendent) categories as sources of variations, looking for statistical significance and effect size (by means of eta-squared) of each source and binary interactions (i.e., age*gender, age*group, gender*group, and age*gender*group).

Table 1
Mean scores and standard deviations (SD) of the entire sample on each of the Perceptions About Suicide Questionnaire (PASQ)

Item		Mean (SD)
1.	The psychological distress phenomenon and suicide among policemen is worrisome and there is need to do something	4.6 (0.69)
2.	The psychological distress phenomenon and suicide among policemen is not worrisome or different with respect to the general population	2.44 (1.33)
3.	There is a need to create specific psychological support programs for policemen manifesting psychological distress	4.67 (0.62)
4.	There is a need to create monitoring and control programs for psychological distress in the Police	4.44 (0.77)
5.	There is a need to create a competent Observatory for studying and conducting research on the phenomenon of suicide in the Police	4.29 (0.9)
6.	Policemen must be informed on psychological distress and suicide through targeted training programs	4.52 (0.72)
7.	The application of the article 48 of the presidential decree 782 of 1985, which decides the withdrawal of the Police identification card in case of neuropsychological disability, is useful for addressing psychological distress in policemen and preventing suicide	3.05 (1.3)
8.	Police physicians are useful reference figures to support and help the policeman who has a psychological problem	3.16 (1.3)
9.	Police psychologists are useful reference figures to support and help the policeman who has a psychological problem	4.08 (1.05)
10.	A police psychologist needs to be present in every police station	4.48 (0.81)
11.	For personal problems, it is preferable to refer to an external psychologist, with no contract with State Police	3.29 (1.13)
12.	Personal problems are among the causes leading a policeman to commit suicide	4.17 (0.92)
13.	Psychological distress is among the causes leading a policeman to commit suicide	3.96 (0.95)
14.	Some personality characteristics are among the causes leading a policeman to commit suicide	3.57 (1.12)
15.	Sudden traumatic events are among the causes leading a policeman to commit suicide	3.75 (1.08)
16.	Occupational problems are among the causes leading a policeman to commit suicide	3.32 (1.13)
17.	Economic problems are among the causes leading a policeman to commit suicide	3.73 (1.08)
18.	Family problems are among the causes leading a policeman to commit suicide	4.03 (0.95)
19.	Problems with justice and law are among the causes leading a policeman to commit suicide	3.48 (1.15)
20.	Medical diseases are among the causes leading a policeman to commit suicide	3.45 (1.18)
21.	Sometimes personal, occupational and family difficulties are excessive for letting someone to face them and may lead to negative and self-destructive thinking	3.54 (1.05)
22.	It is very demanding to enter in a relationship with and help a person who manifests psychological distress	3.98 (0.96)
23.	It is complex to identify those signals indicating psychological distress or heralding a suicidal act	3.9 (0.92)
24.	Facing the suicide issue elicits fear in me	2.22 (1.27)
25.	Facing the suicide issue elicits sadness in me	3.48 (1.33)
26.	Facing the suicide issue elicits anger in me	3.01 (1.45)
27.	Facing the suicide issue elicits interest in me	3.47 (1.3)
28.	Facing the suicide issue elicits disgust in me	1.74 (1.48)
29.	Facing the suicide issue does not elicit any emotion in me	1.62 (1.11)
30.	It is preferable not to speak about psychological distress or suicide and not to face the problem, because suicide is a personal choice that regards only the policeman's private life	1.58 (0.99)

SD: standard deviation.

RESULTS

Descriptive statistics

We analysed the 30 questionnaire items, administered to 6103 workers (mean age 43.96 years; SD = 10.63), including 4478 men (mean age years 43.78, SD = 10.77), 524 women (mean age 45.32 years; SD = 9.33), and 1064 who did not define their age. The *chi*-squared test showed a statistically significant prevalence of men in the sample (χ^2 = 3666.83; $p < 0.0001$).

From the entire sample of 6103 police trainees and superintendents, 5039 participants (mean age 43.96, SD = 10.62) declared their job role. Of these, 3961 were superintendents (mean age 48.63 years, SD = 6.11), and 1078 recruits (mean age 26.78 years, SD = 3.89). The *chi*-squared test showed a statistically significant prevalence of superintendents in the sample (χ^2 = 2394.78; $p < 0.0001$). One-way ANOVA showed a statistically significant difference in age between groups

(F = 12408.04; p < 0.001). We summarized the responses to each item in *Table 1* and main descriptive statistics in *Table 2*.

Principal component analysis

Considering only factors with Eigenvalue > 1, seven factors emerged, the first of which explained 10.86% of the variance, the second 10.74%, the third 7.07%, the fourth 6.3%, the fifth 6.27%, the sixth 5.7%, and the seventh explained 5.1% of the total variance. Cumulatively, the seven factors accounted for 52% of the total variance *(Table 3)*.

The scree-test [12] did not indicate the need to reduce the number of factors. The elements constituting each factor showed a high linear correlation, and Cronbach's *alpha* based on standardised items (0.787) was

Table 2
Sociodemographic characteristics of participants

Group	ALL	Recruits	Superintendents	χ^2	*p*
N	6103	1078	3961		
Gender (male/female/not declared)	5339/652/112	1050/80	4289/572	3666.83	< 0.001
				F	***p***
Age in years (SD)	43.96 (10.63)	26.78 (3.89)	48.63 (6.11)	12408.04	< 0.001

SD: standard deviation.

Table 3
Rotated component matrix (Extraction method: Principal components analysis; Rotation method: Varimax with Kaiser's normalization)

Item	Factors						
	1	2	3	4	5	6	7
1 - The psychological distress phenomenon and suicide among policemen is worrisome and there is need to do something	0.128	***0.683***	0.078	-0.105	-0.024	-0.045	-0.025
2 - Psychological distress and suicide among policemen is not worrisome or different with respect to the general population	-0.126	-0.272	-0.017	***0.39***	0.018	0.213	0.29
3 - There is a need to create specific psychological support programs for policemen manifesting psychological distress	0.036	***0.726***	-0.025	-0.081	0.064	0.115	0.072
4 - There is a need to create monitoring and control programs for psychological distress in the Police	0.06	***0.725***	0.008	0.002	0.055	0.175	0.083
5 - There is a need to create a competent Observatory for studying and conducting research on the phenomenon of suicide in the Police	0.096	***0.76***	0.079	0.026	0.025	0.026	0.036
6 - Policemen must be informed on psychological distress and suicide through targeted training programs	0.059	***0.684***	-0.015	-0.069	0.09	0.052	0.094
7 - Enforcement of withdrawal of Police ID in neuropsychological disability cases helps addressing policemen distress and suicide	0.003	0.057	-0.003	0.286	***0.462***	0.18	-0.004
8 - Police physicians are useful reference figures to support and help the policeman who has a psychological problem	0.061	0.056	0.024	0.084	***0.766***	0.029	-0.065
9 - Police psychologists are useful reference figures to support and help the policeman who has a psychological problem	0.011	0.28	-0.002	-0.079	***0.762***	0.03	0.083
10 - A police psychologist needs to be present in every police station	0.016	***0.533***	0.032	-0.118	0.33	0.106	0.136
11 - For personal problems, it is preferable to refer to an external psychologist, with no contract with State Police	0.044	0.021	-0.004	0.215	***-0.593***	0.152	0.085
12 - Personal problems are among the causes leading a policeman to commit suicide	0.306	0.038	0.036	-0.106	0.027	***0.614***	0.123
13 - Psychological distress is among the causes leading a policeman to commit suicide	0.169	0.198	0.074	-0.107	0.051	***0.682***	0.019
14 - Some personality characteristics are among the causes leading a policeman to commit suicide	0.235	0.098	0.007	0.122	-0.027	***0.675***	-0.003
15 - Sudden traumatic events are among the causes leading a policeman to commit suicide	***0.557***	0.118	0.041	0.025	0.064	0.269	-0.037
16 - Occupational problems are among the causes leading a policeman to commit suicide	***0.722***	0.132	0.06	0.022	-0.02	0.054	-0.024
17 - Economic problems are among the causes leading a policeman to commit suicide	***0.761***	0.012	0.067	-0.058	0.006	0.041	0.042

(Continues)

Table 3
(Continued)

Item	Factors						
	1	2	3	4	5	6	7
18 - Family problems are among the causes leading a policeman to commit suicide	***0.673***	0.044	0.056	-0.119	-0.005	0.269	0.154
19 - Problems with justice and law are among the causes leading a policeman to commit suicide	***0.746***	0.04	0.045	0.038	0.011	-0.009	0.016
20 - Medical diseases are among the causes leading a policeman to commit suicide	***0.579***	0.049	0.058	0.108	-0.012	0.203	0.099
21 - Sometimes personal, occupational and family difficulties are excessive to address and may lead to negative and self-destructive thinking	***0.425***	0.151	0.137	-0.077	0.011	0.143	0.385
22 - It is very demanding to enter in a relationship with and help a person who manifests psychological distress	0.113	0.141	0.079	0.014	-0.033	0.068	***0.731***
23 - It is complex to identify those signals indicating psychological distress or heralding a suicidal act	0.049	0.108	0.059	0.045	-0.043	-0.018	***0.756***
24 - Facing the suicide issue elicits fear in me	0.116	0.009	***0.686***	0.304	0.048	0.029	0.12
25 - Facing the suicide issue elicits sadness in me	0.057	0.035	***0.784***	-0.152	0.01	0.134	0.128
26 - Facing the suicide issue elicits anger in me	0.118	0.074	***0.801***	-0.021	-0.029	0.002	0.011
27 - Facing the suicide issue elicits interest in me	0.179	***0.216***	0.067	***-0.267***	0.085	0.029	0.165
28 - Facing the suicide issue elicits disgust in me	0.085	0.034	0.542	***0.53***	0.029	-0.091	-0.068
29 - Facing the suicide issue does not elicit any emotion in me	0.031	-0.041	-0.056	***0.744***	-0.012	-0.061	-0.009
30 - Preferable not dealing with suicide, because suicide is a personal choice regarding only the policeman's private life	0.033	-0.134	0.158	***0.678***	-0.012	-0.032	0.06
Variance explained (total = 52%)	10.86%	10.74%	7.07%	6.3%	6.27%	5.7%	5.1%

compatible with an excellent internal consistency of the questionnaire. Cronbach's alphas for each Factor were 0.589 for Factor 1, 0.545 for Factor 2, 0.506 for Factor 3, 0.722 for Factor 4, 0.585 for Factor 5, 0.522 for Factor 6, and 0.624 for Factor 7.

The following seven main factors emerged from the analysis of the data:

- health and environmental risk factors;
- need for new preventive interventions;
- emotional reaction to suicide;
- negation, indifference, and minimization;
- utility of current preventive interventions;
- risk related to personal factors;
- intervention difficulties.

Correlations between factors

Pearson's p test showed that each Factor extremely correlated with others ($p < 0.001$), or highly correlated in the cases of Factor 1 with 5, 4 with 5, and 4 with 7 ($p < 0.01$). There were no correlations between Factors 4 and 6 ($p = 0.327$), 4 and 7 ($p = 0.783$), and 5 and 7 ($p = 0.374$).

Between-group factor comparisons

In assessing differences among groups with respect to the seven factors, one-way ANOVA found women to score significantly higher than men on "Multifactorial risk" ($F = 19.729$; $p < 0.001$). Women also scored significantly lower than men on "Utility of current preventive interventions" ($F = 23.436$; $p < 0.001$) and "Negation, indifference, and minimization" ($F = 52.172$; $p < 0.001$) *(Table 4, upper part)*.

Compared to superintendents, recruits scored significantly lower on all factors except "Utility of current preventive interventions" and "Risk related to personal factors" *(Table 4, lower part)*.

Three-way analyses of variance

These analyses showed that the variables "gender" ($F = 12.054$; $p < 0.001$; partial $\eta^2 = 0.002$), gender*group ($F = 9.082$; $p = 0.003$; partial $\eta^2 = 0.002$), gender*age ($F = 10.701$; $p = 0.001$; partial $\eta^2 = 0.002$), and gender*age*group ($F = 10.374$; $p = 0.001$; partial $\eta^2 = 0.002$) significantly affected the Factor 5 (Utility of current preventive interventions) scores. The variables "gender" ($F = 5.809$; $p = 0.016$; partial $\eta^2 = 0.001$), gender*group ($F = 6.723$; $p = 0.01$; partial $\eta^2 = 0.001$), gender*age ($F = 7.987$; $p = 0.005$; partial $\eta^2 = 0.001$), and gender*age*group ($F = 8.479$; $p = 0.004$; partial $\eta^2 = 0.002$) significantly affected the Factor 6 (Risk related to personal factors) scores *(Table 5)*.

DISCUSSION

This study has demonstrated the excellent internal consistency of a purposely-constructed questionnaire, assessing how State Police personnel perceive suicidal phenomena.

Comparing study participants, police recruits were significantly younger than their superintendents, as expected, because they had joined the Police recently,

Table 4
Differences according to gender and professional role

Gender	ALL	Men	Women	F	*p*
Factor 1, mean (SD)	25.33 (5.09)	25.22 (5.09)	26.22 (4.99)	19.729	***< 0.001***
Factor 2, mean (SD)	30.5 (3.66)	30.48 (3.65)	30.7 (3.8)	1.931	0.165
Factor 3, mean (SD)	39.12 (5.16)	39.09 (5.16)	39.41 (5.13)	1.990	0.158
Factor 4, mean (SD)	9.79 (3.31)	9.91 (3.35)	8.85 (2.82)	52.172	***< 0.001***
Factor 5, mean (SD)	13 (3.16)	13.07 (3.15)	12.43 (3.22)	23.436	***< 0.001***
Factor 6, mean (SD)	25.3 (3.69)	25.27 (3.69)	25.56 (3.66)	3.343	0.068
Factor 7, mean (SD)	7.88 (1.54)	7.87 (1.55)	7.94 (1.48)	1.221	0.269
Professional role	**ALL**	**Superintendents**	**Recruits**	**F**	***p***
Factor 1, mean (SD)	25.32 (5.1)	25.45 (5.16)	24.8 (4.82)	13.792	***< 0.001***
Factor 2, mean (SD)	30.49 (3.67)	30.6 (3.71)	30 (3.48)	24.732	***< 0.001***
Factor 3, mean (SD)	39.1 (5.16)	39.39 (5.2)	37.96 (4.85)	67.351	***< 0.001***
Factor 4, mean (SD)	9.8 (3.32)	10.04 (3.41)	8.87 (2.74)	108.595	***< 0.001***
Factor 5, mean (SD)	12.99 (3.17)	12.57 (3.13)	14.8 (2.68)	486.564	***< 0.001***
Factor 6, mean (SD)	25.29 (3.7)	25.1 (3.75)	26.03 (3.4)	55.215	***< 0.001***
Factor 7, mean (SD)	7.88 (1.54)	8.02 (1.49)	7.29 (1.64)	209.08	***< 0.001***

SD: standard deviation. Significant in bold characters.

Table 5
Tests of between-subjects effects

↓Dependent variable		Gender	Group	Age	Gender*Group	Gender*Age	Group*Age	Gender*Group*Age
Factor 1	*F*	0.08	0.001	0.084	0.054	0.102	0.136	0.05
	p	0.777	0.972	0.772	0.816	0.749	0.712	0.776
	Partial η^2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Factor 2	*F*	1.288	0.268	0.11	1.37	2.353	0.141	2.385
	p	0.257	0.605	0.741	0.242	0.125	0.707	0.123
	Partial η^2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Factor 3	*F*	0.449	0.018	0.235	0.499	0.891	0.17	0.941
	p	0.503	0.895	0.628	0.48	0.345	0.68	0.332
	Partial η^2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Factor 4	*F*	0.015	0.017	0.815	0.865	0.895	0.853	0.69
	p	0.903	0.896	0.367	0.352	0.344	0.356	0.406
	Partial η^2	< 0.001	< 0.001	< 0.001	<0.001	< 0.001	< 0.001	< 0.001
Factor 5	*F*	12.054	0.294	2.819	9.082	10.701	3.464	10.374
	p	***0.001***	0.588	0.093	***0.003***	***0.001***	0.063	***0.001***
	Partial η^2	0.002	< 0.001	< 0.001	0.002	0.002	0.001	0.002
Factor 6	*F*	5.809	0.147	1.701	6.723	7.987	1.79	8.479
	p	***0.016***	0.702	0.192	***0.01***	***0.005***	0.181	***0.004***
	Partial η^2	0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	0.002
Factor 7	*F*	0.001	0.442	0.682	0.005	< 0.001	0.287	0.003
	p	0.981	0.506	0.409	0.946	0.989	0.592	0.954
	Partial η^2	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

while superintendents were in many cases advanced in their career and in some cases, towards the end of their service.

As far as individual item responses are concerned, all subgroups showed significant availability and openness towards the issue of psychological distress and suicide, which is perceived as a remarkable concern in State Police workers compared to the general population, thus

prompting police workers to stress the need for targeted preventive interventions.

As with intervention strategies for suicide prevention, there was agreement on the need to create new psychological support programs, monitoring and control over psychological distress and providing information and training aimed at addressing the problem of suicide in workmates. In addition, participants considered useful to set up an observatory that would provide the necessary competence for studying the field and conducting research.

The highest dispersion in opinions regarded the items 26 (SD = 1.45; Facing the suicide issue elicits anger in me) and 28 (SD = 1.48; Facing the suicide issue elicits disgust in me); however, the fact that most people chose the fence sitter response, shows that people like to keep a neutral position regarding this issue. The three items where respondents scored nearest to the neutral response were items 7, 8, and 26. Item 7 focuses on the application of the Decree of the President of the Italian Republic n. 782, article n. 48 [13], as a tool for the protection and prevention of suicide and psychological discomfort. This attitude of response on the application of the article n. 48 could reflect the fact that this legislation has possible negative implications for career in the Police and for professional realization in general, as well as for the sense of identity and role as a Police operator, but may have positive aspects as well. Police workers tended not to endorse extreme views, but scored more around the middle, as they plotted the item against both their own perspective and their colleagues'. Hence, a central position of response prevailed, that however indicates neither partial agreement or disagreement on the usefulness of legislation. It should be stressed that the law, as it is, fairly criminalizes psychological distress and suicide; our sample's views pretty match the views of a Ghanaian sample of policemen who are against their law of criminalization of suicide [14]. Item 8, "Police physicians are useful reference figures to support and help the policeman who has a psychological problem", had a similar mean score and standard deviation *(Table 1)*, implying that policemen, both recruits and superintendents, viewed police physicians as marginal figures at this respect, thus stressing the need for more specialised professional figures, like psychiatrists and psychologists.

Regarding role models that can provide psychological support in the event of psychological distress, there is a wider consensus on the role of the police psychologist than that of the police physician. Policemen were more cautious in considering the usefulness of the role of the police physician in psychological support. Both groups express consensus over the need to ensure the presence of a psychologist in every police station. In general, there seems to be a greater agreement on the usefulness of an internal psychologist who refers to the Administration, rather than of an external psychologist.

Regarding the motivations of suicidal acts, personal problems and, secondly, family problems, psychological distress, sudden traumatic events, economic and legal problems, suffering from organic illness and some personality features appear to be held in consideration by policemen. The motivation of work problems was only partially considered. Most responses were around central positions, indicating a partial agreement level. In general, an excessive accumulation of personal, work, and family problems is considered difficult to deal with and can lead to negative and self-destructive thoughts. This data seems to highlight a multifactorial and complex view of suicide motivation by participants in our study.

Regarding suicide-related emotions, the idea of dealing with suicide led predominantly to sadness and interest, while anger, fear or disgust were likely to be denied. Participants perceived difficulty in getting in touch and helping people with psychological distress and recognizing the signs of distress and ominous signs of a suicidal gesture.

Factorial analysis showed that the questionnaire evaluates seven principal factors, which concern: 1) health and environmental risk factors; 2) the need for new preventive interventions; 3) the emotional reaction to suicide; 4) negation, indifference, and minimization; 5) the usefulness of current preventive interventions; 6) the risk related to personal factors; 7) intervention difficulties.

Overall, subjects who participated in the study have expressed prominent levels of interest and awareness that suicide is a phenomenon that can be attributed to several reasons. They were aware of the distinct types of emotions that can be encountered in those who face the problem and the difficulties that may arise in dealing with people at risk. All participants evaluated positively the current preventative interventions, while recognizing the need for further prevention initiatives, and showed little indifference and minimization regarding the problem.

In summary, the police personnel were aware of suicidal behaviour afflicting their organization after having received training on the wellbeing of the staff. They stressed the need for innovative intervention programs that could reduce suicidality; such programs were shown to be effective in that aim in Canada [15].

Women estimated that suicidal phenomena are related to health and environmental factors more than men; they were less indifferent to the problem and downplayed the usefulness of current preventive interventions. Recruits scored lower than superintendents on all factors except "Utility of current preventive interventions" and "Risk related to personal factors", meaning that they tend to underrate the whole problem compared to their older colleagues. As regards the usefulness of current preventive interventions and the risk related to personal factors, we have found that gender, group membership (recruits *vs* superintendents), and age significantly influence the perception of these aspects. Women, older personnel, and superintendents largely believe that current interventions need to be implemented and better underline the importance of environmental factors.

Limitations

The main limitations of this study were the fact that we did not administer the questionnaire at baseline, so we cannot assess learning, and the absence of a comparison group from the general population. However, as

the questionnaire was designed solely to assess the perception of the issue of suicide by police personnel, the responses of a general population sample filling in the questionnaire would not have been valid or applicable. Another possible limitation is that we failed to analyse our multisite data according to department size, as across the country the size differs, and there is evidence from the US that in smaller departments, officers show a higher incidence of suicide [16], something that could have affected our results. Furthermore, our study lacks a confirmatory analysis, which would have strengthened our results, but we will seek one in future module applications. It could be argued that our Likert scale had an odd number of possible responses, a fact that favours the "fence sitting" phenomenon and prompts respondents to select the middle, "neutral" response, i.e., 3 in our case. In fact, for most items, the mean was about 3, indicating somehow a bias at this respect. However, there are indications for using 5-response/item questionnaires when conducting surveys [17]. One strength of this study is that is the first to investigate specific post-training policemen perceptions of suicide issues in their organization and the first factor analysis of a questionnaire dedicated to this aim.

This is a first Italian study in the direction of teaching superintendents and police recruits how to deal with suicide. The implications are multiple, and involve better training of policemen and their more skilful management of suicidal risk in both peers and the general population, when they are called for crisis interventions. A further development could be the retesting and further analysis of the items, so to detect and retain the most significant, so to provide a shorter version. Future directions should involve the assessment of learning objectives (baseline-end comparison) and the refinement of the training module, so to obtain a reduction in the incidence of suicidal events in the police and, ultimately, in the general population.

CONCLUSIONS

The questionnaire has been useful in analysing the perception of the multifactoriality of suicidal phenomena, the type of preventive interventions, of emotions elicited by dealing with suicide, of minimization and of difficulties in intervention in at risk policemen.

The brief analysis of State Police staff data provided a picture of a mature and appropriate perception of the phenomenon of psychological distress and suicide, reflecting their aspects of complexity. In addition, the ability has emerged to express their needs with respect to the need for psychological support, control and monitoring of psychological distress and suicide and specific training on these issues.

Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

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